



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ZOOLOGY.

Reappearance of the Freshwater Medusa, *Limnocodium sowerbii*.—Mr. E. Ray Lankester reports finding well-grown specimens of *Limnocodium sowerbii* in the Victoria Regia tank of the Sheffield Botanic Gardens. This jelly-fish was first noticed in 1880 in Regent's Park, to which it had probably been transported from Brazil on the rootlets or leaves of a *Pontederia*. It was observed from year to year until 1891, when all trace of it was lost, and naturalists gave up the hope of carrying on any further investigation into its life history. Its appearance in Sheffield is accounted for by presuming that some reproductive germs were attached to the water plants sent from Regent's Park to re-stock the tank in Sheffield, April 4, 1892, and April 7, 1893. The curious thing is that in 1892 and 1891 no *Limnocodium* were seen in the original source, nor in 1893 except the few sent from Sheffield and placed there by Mr. Sowerby.

This beautiful little organism was first studied by E. Ray Lankester, who ascertained the following facts.

The jelly-fish appear suddenly each year as early as April or as late as August, and remain from five to twelve weeks, when they die down and absolutely disappear. When first seen they are extremely minute, $\frac{3}{16}$ of an inch in diameter, and gradually develop to the full size of half an inch in diameter. Of the many hundred specimens examined in successive years, every one without exception were males. They produced abundant motile spermatozoa, but not a trace of egg-cell has ever been found in any one of them.

In 1884 Dr. A. G. Bourne described a diminutive polyp, not more than $\frac{1}{8}$ of an inch long, devoid of tentacles which he found adhering to the root filaments of *Pontederia* in the same tank in which the *Limnocodium* was discovered. This polyp was supposed to be the "trophosome" of the *Limnocodium* medusa. That this inference was true was proved Dr. Fowler in 1890, who was fortunate in seeing the little spherical young found floating in the tank, nipped off by a process of transverse fission from the free ends of the minute polyps described by Bourne.

The next question, How do the polyps originate? has not yet been answered. They increase by budding, but never form colonies of more than four "persons."

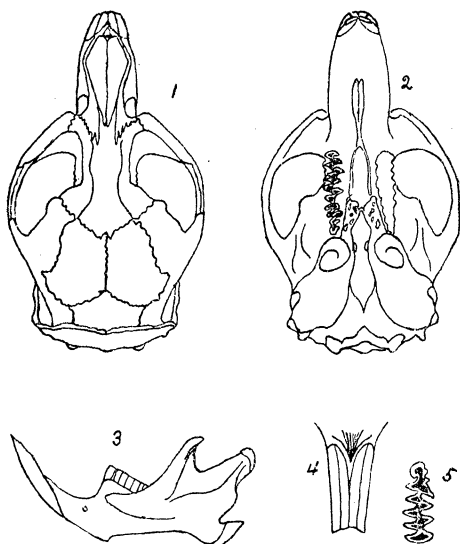
In conclusion, the author refers to the remarkable form worked out

by Mr. R. T. Günther during last winter, the *Limnocnida tanganyisiae*, a fresh water jelly-fish from Lake Tanganyika. Individuals of three kinds are described by Mr. Günther, viz.: males, females, and asexual individuals which produce crops of buds on the manubrium. While differing from *Limnocodium* in most respects, *Limnocnida* agrees with it in the minute structure of the marginal sense organs. According to Mr. Lankester no light is thrown by *Limnocnida* on the problem of the life history of *Limnocodium*. (Nature, Dec. 7, 1893.)

The American freshwater hydroid *Microhydra ryderii* Potts, is supposed to be a near ally *Limnocodium*.

Description of a New Genus and Species of Arvicoline Rodent from the United States, Rhoads, Gen. et. sp. nov. (Lake Kichelos, Kittitas County, Washington.)—**AULACOMYS ARVICOLOIDES.**—*Diagnostic Characters*—Skull large, massive, angular; malars parallel. Superior incisors long and slender (about equalling length of nasals), projecting anteriorly, strongly recurved and with flattened faces. A narrow, longitudinal sulcus equally divides the anterior face of each superior incisor, this groove, slightly magnified, showing a clear-cut, well-defined channel. To the naked eye this channel can be detected only on closest scrutiny. First lower molar with six angles on each side, two isolated triangles on the outer, and three isolated triangles on the inner side. On the inner side these are made up: 1, an inner posterior angle or shoulder of the anterior loop; 2, a rounded angle widely separated from the first but basally connected therewith by a continuous valley and reaching nearly as far from the median line as angle No. 3; 3, 4 and 5, large equidistant acute triangles of equal size, much larger and longer than opposing outer triangles and separated therefrom by a zigzag median line of enamel forming the alternating bases of opposing series of triangles; 6, the inner angle of posterior loop. Exteriorly the angles are formed as follows: 1. a rounded corner at the outer base of anterior loop; 2. a small angle abutting on the extended valley of anterior loop, said angle being anterior to plane of angle (No. 2) of the opposite side; 3. a rounded angle, widely separated from angle No. 2 of same side, due to the extreme posterior deflection of the crescent-like loop which angle No. 3 terminates; this loop is connected by a narrow valley with the anterior loop and in like manner with its preceding angle on the same side and the two opposing angles, the five angles thus connected representing the four normally present in the anterior trefoil of recent *Arvicola*, *Evotomys*, *Synaptomys*, *Myodes* and *Cuniculus*; 4 and 5.

Two triangles of equal size, their bases formed by the median line of enamel connecting the bases of the three larger opposing internal triangles already mentioned; 6. A rounded angle of the posterior loop distinctly separated from its preceding triangle (No. 5) by full width



AULACOMYS ARVICOLOIDES, Type.

Explanation of Plate.—1. Skull, from above. 2. Same, from below. 3. Exterior of left Mandible. 4. Anterior view of superior Incisors. 5. Crown of right, lower first Molar. (Figs. 1, 2, 3 & 4 $\times 1\frac{1}{2}$ diameters; fig. 5 $\times 2\frac{1}{2}$ diameters).

of base of last inner triangle. The molar series are prismatic and non-rooted, Remainder of molar dentition much as in the genus *Arvicola*. Owing, however, to the greater relative depth and width of the entrant angles in *Aulacomys* the basal corners of opposing triangles of the lower molar series do not overlap as in *Arvicola* but stand distinctly upon their respective sections of the median enamel wall. Frontal bones flattened superiorly and lacking trace of supraorbital ridges. Nasals, short, abruptly triangular, terminating posteriorly in a point, very broad anteriorly and deeply notched subterminally. Nasal process of premaxillary, reaching behind anterior plane of orbits, far behind base of nasals and terminating in a slender point. Auditory bullae, triangular, narrow, not encroaching on basisphenoid, the tympanic process of the meatus (viewed from below) lying within lateral profile of the brain case. Postpalatal notch acute, terminating the hastate pterygoid fossa, so formed by the contraction of the pterygoids. Con-

dylar ramus short and heavy with strong posterior shoulder forming a knob at base of condyle, containing the greatly extended root of lower incisor. Coronoid process, stout, erect and triangular. Angle very short and massive.

Body probably stouter than in *Arvicola*. Tail over half the length of head and body, sparsely and evenly coated with short spines and terminated by a well-defined pencil of slender hairs. Feet five-toed, each with five tubercles; claws long and slender. Whiskers pronounced, the longest reaching behind ears.

Aulacomys has [the superficial appearance of *Arvicola* but with a very long and apparently naked tail and heavy whiskers. Cranially, it combines the molar dentition of *Arvicola* with the incisor dentition of *Synaptomys*. In these very respects, however, it differs from both genera—from *Arvicola* in the five-angled formation of the anterior section of the first lower molar, and from *Synaptomys* in the length, narrowness, protrusion and *central* sulcation of the upper incisors, also in the extension of the roots of the lower incisors far beyond the last molar.

The dentition of *Aulacomys* shows, in the number of angles of the anterior lower molar, an approach to the extinct form, *Arvicola* (*Anapogonia*) *hiatidens* Cope, from the bone caves of Pennsylvania¹ but differs radically from it in the isolation of the triangles.

The absence of supra-orbital ridges, the posterior prolongation of the nasal premaxillary processes beyond nasals, the acute post-palatal notch, the shape of the pterygoid fossa and the massiveness of the posterior members of mandible are all, in a greater or less degree, diagnostic of *Aulacomys* as distinguished from other Arvicoline genera.

Specific characters.—Type, No. 1358; Ad., ♀. Col. of S. N. Rhoads, Lake Kichelos, Kittitas Co., Washington [Alt. 8,000 ft.], September, 1893. (Col. by Allan Rupert.)

Description.—Characters as described for genus. Above, reddish-brown, lined with black. Pelage, basally, everywhere plumbeous. Below, hoary plumbeous, lightest on throat. Upper parts of feet blackish. Tail very slightly darker above, than below. Ears not prominent, well-haired on both sides and with distinct valvular antitragus. Whiskers black.

Measurements (taken in flesh by collector).—Total length.—197;² tail 70; (taken from damp, relaxed skin), hind foot 27; ear 10; pencil 7.

¹Proc. Soc. Amer. Philos. 1871, P. 91.

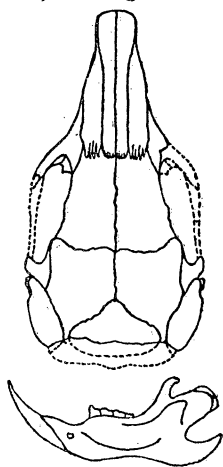
²Millimeters.

Skull.—Basilar length 29; total length (occipito-nasal) 31; zygomatic breadth 19; nasal length 9; interorbital constriction 5; interparietal breadth 7; interparietal length 4.9; crown length of molar series 7.4; greatest depth of cranium 10.9; length of mandible 20; height of coronoid process 11; ratio of zygomatic breadth to basilar length 65.5; zygomatic breadth to occipito-nasal length 58.

The specimen on which the foregoing characters are based was taken near Snoqualmie Pass on the Cascade Mountains. Out of a large series of rodents from this district it is the only specimen of its sub-family. It arrived in the form of a flat skin, reversed, with the skull separate and intact.—SAMUEL N. RHODS.

Description of a New *Perognathus* collected by J. K. Townsend in 1834. *PEROGNATHUS LATIROSTRIS*. Sp. Nov.—Type, No. 694, ad ♂, Col. of Acad. Nat. Sci. of Phila.; “Rocky Mountains, J. K. Townsend;” Summer, 1834.)

Description—(mounted specimen, lacking tail, once preserved in spirits).—Largest known species of the genus. Upper half of head and body to root of tail, brownish-yellow, interspersed medially with black, spinous hairs, becoming purer brown on sides and bordered laterally from base of nose to tail with a broad ill-defined line of pure fulvous. No black tips to brown hairs of back, all hairs being unicolor from root to tip; black hairs coarsest. Pelage long and coarse throughout. Whiskers, slender, sparse, the longest reaching far behind the ears. Lower parts, feet, forelegs to shoulder, and inside of hind legs, dirty white. Ears pronounced, rounded, rather sparsely haired, with marked antitragus not higher than broad at base. Hind ears and spot over eyes fulvous. Hairs of base of tail same color as under parts all round point of fracture, seeming to indicate a unicolor tail. Soles hairless along median line to heel. Cheek pouches very large, external opening of same stretching from upper incisors half way to forelegs.



Perognathus latirostris, Type.
(Enlarged one and two-sevenths
diameters.)

Skull—(occipital and postero-mastoid region absent); cranium deep, slightly arched, as viewed from above, subrectangular; rostral portion very wide; interparietal bluntly mucronate anteriorly; coronoid pro-

cess erect, abruptly recurved near the blunt tip, anterior width of nasals nearly twice that of posterior width; a broad supraorbital furrow laterally borders the brain case from the lacrymals to the mastoid side of parietals, audital bullae separated anteriorly by full width of basi-sphenoid, molariform dentition as in *P. paradoxus*.

Measurements—(from mounted specimen); length of head and body 145; hind foot (shrunken), 27; ear from crown, 6.

Skull.—total length (approximate) .35; tip of nasals to interparietal 28.4; base of incisor to anterior tip of audital bullae 18; zygomatic width (at outer bases of squamosal process of malar) 17.5; interorbital constriction 8.8; length of nasals 14; nasal width (near tip) 4.2; nasal width (near base) 2.2; interparietal width 8.2; crown length of upper and lower molar series 4.6; length of median parietal suture 5; greatest parietal length (masto-squamosal) 10; length of mandible (inner base of incisors to condyle) 17.4; height of coronoid process from angle 8; greatest depth of cranium 11.

The specimen from which the above description is taken was collected by J. K. Townsend during his memorable Rocky Mountain journey nearly sixty years ago. It has been exhibited in the museum of the Academy during the greater part of that period and has lost its tail in the service. The locality given on the present label is only approximate, if correct at all, as an earlier entry of the specimen (probably copied from the original one) in the catalogue gives the specimen as "694, *Thomomys rufescens*, yg., J. K. Townsend, Columbia River." This name was, a long while ago, altered to "*Perognathus fasciatus*," as the museum label now stands. Probably the person making the last identification changed the given habitat to "Rocky Mountains" to accord with the habitat assigned to *fasciatus* by Baird. The specimen was probably taken east of the 34th meridian and south of the 43rd parallel, in Nebraska or Wyoming. It is not impossible that it came from a more western region. Its differentiation from its nearest ally, *P. paradoxus*, indicates a different faunal habitat from that occupied by the latter. Dr. Townsend makes no mention of the genus *Perognathus* in his list of the mammals observed during his journey, nor does Dr. Bachman, in his supplementary list of novelties published in the Journal of the Academy of Natural Sciences. It is possible that the specimen, owing to its mutilated (tailless) condition and being put in alcohol, was hastily overlooked, or classed as a young *Geomys* (the catalogue entry implies this), and later on it was mounted as such.

The specimen is over-stuffed, but does not appear unduly stretched laterally. From its appearance and the dimensions of its skull it is

evidently a larger species than *paradoxus*, the largest of the genus hitherto known. In many respects, notably of the dentition and general proportions of the brain case, and in size and coloration, *latirostris* resembles *paradoxus*, but is strikingly different in the size and proportions of the rostrum and of the interparietal. Owing to the loss of occipital portions I am unable to give the usual ratios for sake of comparison with Dr. Merriam's tables. *Perognathus latirostris* belongs to the *paradoxus* group of the subgenus *Chaetodipus*.—SAMUEL N. RHODES.

Zoological News.—MOLLUSCA.—The experiments in oyster culture carried on at Roscoff, France, have been extremely satisfactory. In a communication addressed to the Academy of Sciences at Paris, M. de Lacaze Duthiers gives a detailed statement of what has been accomplished. The spat were planted in a closed fish pond so situated that at high tide the sea water could find entrance. The young oysters grew rapidly, and in three years, that is to say the fourth year of their age, they were well grown and fine in flavor. During this year, young were produced in large quantities, thus settling the question of the age for reproduction in the oyster. (Pêches Maritimes, T. I, 1893.)

ARTHROPODA.—Mr. Walter Faxon reports 105 new species of Crustacea, some of which represent new genera, in the collection obtained by Mr. Agassiz in the dredging carried on by the U. S. Fish Commission Steamer, "Albatross," off the west coast of Central America and Mexico and in the Gulf of California, during 1891. (Bull. Harvard Mus. Comp. Zool., Vol. XXIV, 1893.)

According to Dr. C. O. Porat, the Syrian Myriopods collected in 1890 by Dr. Barrois comprises 19 species, many of which are new, distributed among 10 genera. In its general aspect this Syrian fauna resembles that of southern Europe and northern Africa, being intermediate in its characteristics. The species are described and figured in Revue Biologique, Nov., 1893.

VERTEBRATA.—The report of the U. S. Fish Commission for 1889-91 contains a review of the Sparoid fishes of America and Europe, by D. S. Jordan and B. Fesler. The family comprises about 55 genera and some 450 species, all valued as food, chiefly inhabiting the shores of warm regions. The authors consider the group closely allied to the Serranidæ on the one hand, the genus *Xenistius* being very close to the Serranoid genus *Kuhlia*; on the other hand, *Scorpiis*, *Cyphosus*, etc., approach the *Chaetodontidæ*. Of the 12 subfamilies into which the

group is divided, 3 are exclusively American, and 2 are confined to the Old World.

M. Leon Vaillant describes a new genus of fishes from the Caroline Islands of which there are now two individuals at the Paris Museum. This fish resembles *Fierasfer* of Cuvier, but differs from it in the size of the dorsal fin, and more particularly in the character and position of its scales. In the Caroline genus the scales are distinctly separate, large in proportion and form a sort of network with lozenge-shaped meshes over the body; they are not imbricated, but merely touch, end for end. It is this singular arrangement of the scales that leads Mr. Vaillant to create a new species to which he refers these fish with the specific name *Rhizæketicus carolinensis*. (Revue Scientifique, Dec. 1893.)

A list of the Mammals of Rio Grande de Sul published by Dr. Herman von Ihering shows the following distribution: Marsupialia 11; Diplarthra 8; Cetacea 2; Edentata 6; Glires 24; Chiroptera 17; Carnivora 19; Pinnipedia 2; Quadrumana 3. (Rio Grande de Sul, 20, IV, 1892.)

From certain cranial and dental peculiarities, Mr. C. Hart Merriam considers the Yellow Bear of Louisiana a species distinct from *Ursus americanus* Pallas and *U. horribilis* Ord. He gives a description based on five skulls from Morehouse Parrish, Louisiana, and claims for it the name *U. luteolus*, given by Griffith in 1821. (Proceeds. Biol. Soc. Wash., Dec., 1893.) He thinks it is the Cinnamon Bear of Audubon and Bachman, but of this there is much doubt.

Two new species are added to the list of Mammals from East Africa; a dormouse, *Eliomys parvus*, closely resembling *E. kellenii*, and a mouse, *Mus tana*, allied to *M. musculus*. Both species are described by Mr. Frederick True in the Proceeds. U. S. Natl. Mus., 1893.